DOCUMENT RESUME

ED 114 672 CE 005 567

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TITLE Supply and Demand for Vocational Agriculture Teachers in Washington State, 1975 and 1976.
INSTITUTION Washington State Univ., Pullman. Coll. of Education.
PUB DATE Aug 75
NOTE 56p.

EDRS PRICE MF-$0.76 HC-$3.32 Plus Postage
DESCRIPTORS Enrollment Trends; *Faculty Mobility; Program Development; Questionnaires; *State Surveys; Tables (Data); Teacher Attitudes; Teacher Persistence; *Teacher Supply and Demand; *Vocational Agriculture; *Vocational Agriculture Teachers
IDENTIFIERS *Washington

ABSTRACT

The study's purpose was to determine the supply and demand for vocational agriculture (Vo-Ag) teachers in Washington State for 1975-76. Primary source data were collected from the files of the State superintendent; institutional information was obtained from Vo-Ag teacher program directors of five regional State universities; and a questionnaire was mailed to all Washington secondary schools, with a 97 percent return rate. Among the 11 general findings were these: class sizes, enrollments, and offerings in Vo-Ag have increased in the 1970's, as has the number of high schools offering Vo-Ag courses; Vo-Ag teachers generally perceive their teaching loads to be heavier than those of other teachers; Vo-Ag teachers are generally younger than their cohorts. One of three reasons cited by high schools without Vo-Ag programs was the unavailability of certified Vo-Ag teachers. Enrollments of the five teacher preparatory universities appear to be in a steady-state, except for Utah. The demand seems to exceed the supply for 1976 by a range of from 3 to 18 teachers. Other findings related to teacher mobility and loss. It is concluded that factors affecting supply and demand for Vo-Ag teachers be studied further. An agricultural education checklist and the survey instrument are appended. (Author/AJ)

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# SUPPLY AND DEMAND FOR VOCATIONAL AGRICULTURE TEACHERS IN WASHINGTON STATE, 1975 and 1976

by

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and

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CE 005 567

Washington State University
College of Education
Office of Field and Research Services
Pullman, WA 99163
August 1975

Acknowledgments

We wish to acknowledge Mr. Art Nelson, Program Director of Vocational Agriculture and Renewable Natural Resources and Mr. Gene Forrester, Program Supervisor of Vocational Agriculture, Office of State Superintendent of Public Instruction, Olympia for their invaluable assistance in obtaining primary source and other previously unreported data. A special note of appreciation goes to all the Vocational Agriculture teachers and high school principals who responded to the survey and to John Schlotfeldt who aided in the original design of the study. Tammy Siebenberg and Bienvenida Pfeifer provided the secretarial assistance for the project and typed the manuscripts and camera ready copy for printing. The Duplicating and Mailing Services at Washington State University printed and bound the report.

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## Abstract

Introduction. The purpose of the study was to determine the supply and demand for Vocational Agriculture (Vo-Ag) teachers in Washington State for 1975-76. Primary source data were collected from the files of the Washington State Superintendent of Public Instruction. Institutional information was obtained from the Vo-Ag teacher program directors at Washington State University, Montana State University, Utah State University, Oregon State University and the University of Idaho. A questionnaire was mailed to all 311 secondary schools in Washington to obtain information relating to the topic. A total of 302 instruments were completed accounting for a 97 percent return rate.

General findings. All generalizations refer to Vo-Ag classes or teachers.

1. There has been a continued increase in class sizes, enrollments and offerings in Vo-Ag during the 1970's.
2. There is a general increase in the number of high schools offering Vo-Ag courses.
3. Vo-Ag teachers generally perceived their teaching loads to be heavier than those of other teachers.
4. Those high schools with no Vo-Ag program reported three basic reasons for the absence: (a) lack of student interest, (b) no need for the curriculum and (c) no certified Vo-Ag teacher available.
5. The Vo-Ag teacher cohort tends to be somewhat younger than the total state teaching corps.
6. Vo-Ag teacher loss and mobility appears to be less than that of the state's teaching corps.
7. Vo-Ag teachers who leave teaching do so for retirement or moves to farming, agri-business or business.
8. Enrollments of five Vo-Ag teacher preparatory universities seems to be in a steady-state, except for Utah State University which reported 100 percent increase in expected enrollments for the 1975-76 school year.
9. Washington draws few non-experienced teachers from out-of-state, with Washington State University the primary source of supply.
10. The Demand seems to exceed the Supply for 1976 by a range of from 3 to 18 teachers, depending on variables used.
11. Five factors affecting supply and demand for Vo-Ag teachers should be investigated to determine more accurately the demand.

SUPPLY AND DEMAND FOR
VOCATIONAL AGRICULTURE TEACHERS IN WASHINGTON STATE
1975 and 1976

## Purpose of the Study

The College of Education at Washington State University funded a study to determine (1) the supply and demand and (2) the present and near future needs for Vocational Agriculture (Vo-Ag) teachers in Washington. The results of the study will be used by Washington State University for curriculum planning and by the Office of the State Superintendent of Public Instruction for guidance in establishing instructional policies. The results will also be of value to all school districts for identifying trends in Vo-Ag program and teacher demands.

In addition, the study may provide some data that will be useful in determining the need to expand the Vo-Ag teacher program at Washington State University or to add Vo-Ag teacher programs at other institutions of higher education. Since supply and demand data for Vo-Ag are critical to either program expansion or program initiation, the study may act as a preliminary data source for decision-makers at the Board of Regents level.

## Method

The study was divided into four basic phases. The first phase consisted of data collected from the Office of the Washington State Superintendent of Public Instruction. The data include such items as the number of students enrolled in Vo-Ag classes, the number of Vo-Ag teachers, the number of Vo-Ag classes being taught, the types of certificates held by Vo-Ag teachers, the number of high schools offering Vo-

Vo-Ag courses, age and experience of Vo-Ag teachers, and primary reasons for teachers leaving Vo-Ag teaching.

The second phase of the study involved surveying the major higher education institutional sources for Washington Vo-Ag teachers. The five institutions that were identified as being major sources of Vo-Ag teachers for Washington were Washington State University, University of Idaho, Oregon State University, Montana State University, and Utah State University. These institutions were surveyed to determine the number of Vo-Ag graduates who seek teaching positions in Washington. Past trends and possible future input to Washington's Vo-Ag programs were requested from these universities.

Phase three consisted of a survey of all secondary schools in Washington. Of the 311 questionnaires which were mailed, 302 were returned. This is a 97 percent return rate. Accepted follow-up techniques were used to increase original returns (i.e., follow-up post cards, second questionnaires, and telephone interviews).

The purpose of the survey instrument was to determine: (1) the number of schools planning to implement new Vo-Ag programs, (2) plans for current Vo-Ag program expansions or reductions, (3) the need for more Vo-Ag teachers, and (4) the number of Vo-Ag teachers leaving their positions. No attempt was made to gather data for program evaluation or for identifying specific courses offered. The data which were collected were used solely for identifying Vo-Ag teacher supply and demand for the State of Washington.

The fourth and final phase of the study consisted of data analysis. The data obtained from the high school survey were key-

punched on data cards and analyzed with the aid of a computer. Keypunch operators were instructed to punch a zero in the data card when comments were written by a respondent. The appearance of the zero on the computer print-out was used as a flag by the researchers so that all comments could be read and analyzed.

Frequency distributions were computed for total responses, and responses (1) from schools with a Vo-Ag program, (2) from schools without a Vo-Ag program, (3) from small schools (less than 500 students), (4) from large schools (500 students or more), (5) received before May 18, 1975, and (6) received after May 18, 1975.

The frequency of data distributions received before May 18 were computed separately so that the researchers could ascertain if early responses differed significantly from later responses. It was assumed that late respondents may not have had a personal interest in the survey topic, therefore, would not have completed the instrument as carefully as early respondents. However, no differences were observed in the patterns of late returns.

The data from the high school survey, the university survey, and the information from the Washington State Superintendent of Public Instruction (SPI) are reported herein.

## Results

There were three major concerns about Vo-Ag teacher supply and demand in Washington: (1) Are teachers of Vo-Ag classes properly trained and certified? (2) Are schools currently operating Vo-Ag programs with the proper number of Vo-Ag teachers? and (3) Will a greater or fewer

number of Vo-Ag teachers be needed in the near future? Each concern is addressed separately.

Vo-Ag Teachers--Preparation and Certification

Table 1 shows the total number of Vo-Ag teachers in Washington from 1970-71 through 1974-75. Of the 220 Vo-Ag teachers who taught in 1974-75, 34 held special certificates. (This information was obtained from the files of the SPI.) A special certificate is awarded to a teacher who does not hold a degree in Agricultural Education* but is judged to be qualified to teach a specified Vo-Ag course. Job experience or special coursework in a specific area is the usual requirement for a special certificate. Such certificates are usually awarded for one year only, but may be renewed. Although it is usually desirable to have all Vo-Ag teachers holding a degree in Agriculture Education, it is not feasible in all cases because many teachers must teach a variety of subjects. However, attempts should be made to recruit the highest possible number of Vo-Ag teachers holding a degree.

Thus, it appears that 84 percent of the Vo-Ag teachers hold full certification; while 16 percent do not. Since we did not examine individual transcripts of the latter 16 percent no definitive conclusion about preparation may be drawn about these individuals. In some cases persons holding the special certificates teach one class. Whether it would be feasible to hire a fully-certificated Vo-Ag teacher for such schools or classes is a question beyond the scope of this study.

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*See Appendix A for the requirements for a B.S. degree in Agricultural Education at Washington State University.

Further, 148 Vo-Ag teachers taught Vo-Ag courses/classes on a full-time basis during 1974-75. This number accounts for 63 percent of the total. Thirty-seven percent taught Vo-Ag on less than a full-time basis. These statistics may have great relevance on supply and demand.

Table 1

Number of Vocational Agriculture Teachers in Washington State 1970-71 through 1974-75

| Academic Years | Number |
|---|---|
| 1974-1975 | 220 |
| 1973-1974 | 203 |
| 1972-1973 | 184 |
| 1971-1972 | 177 |
| 1970-1971 | 163 |

Source: Coordinating Council for Occupational Education Directory of Teachers. (Note: as of July 1, 1975, the CCOE has been renamed and replaced by the Washington State Commission for Vocational Education.)

The Numerical Status of Vo-Ag Teachers

Table 2 shows a trend of increased class size for Vo-Ag courses from 1970-71 to 1973-74. The total enrollment trend is up with an increase of nearly three students per class--from 18.4 to 21.3. It might be observed that 21 students in activity courses such as Vo-Ag could cause problems in safety, supervision, and teacher-student interaction.

Table 2

Number of Students Enrolled in Vocational Agriculture Classes in Washington High Schools 1970-1974[a]

| Academic Year | Number of Students Enrolled[b] | Total Number of Classes | Mean Class Size |
|---|---|---|---|
| 1973-1974 | 20,918 | 981 | 21.3 |
| 1972-1973 | 18,483 | 952 | 19.4 |
| 1971-1972 | 16,443 | 894 | 18.4 |
| 1970-1971 | 14,679 | 794 | 18.4 |

[a]Does nct include enrollment for agriculture preparation classes, i.e., non-Vo-Ag classes. Source: Coordinating Council for Occupational Education Print-out #1083.

[b]Unadjusted enrollment figures. Some students are duplicated in these figures.

Table 3 shows that not only are Vo-Ag class sizes increasing, but that on the average Vo-Ag teachers instruct more students per day. The average number of students per Vo-Ag teacher has increased from 90 in 1970-71 to 103 in 1973-74.

Table 3

Students per Teacher Ratio for Vocational Agriculture Teachers in Washington 1970-1974

| Academic Years | Number of Vo-Ag Teachers[a] | Number of Students Enrolled in Vo-Ag Classes[b] | Vo-Ag Students per Vo-Ag Teacher |
|---|---|---|---|
| 1973-1974 | 203 | 20,918 | 103 |
| 1972-1973 | 184 | 18,483 | 101 |
| 1971-1972 | 177 | 16,443 | 93 |
| 1970-1971 | 163 | 14,679 | 90 |

[a]Not necessarily Full-time Equivalents (FTE), but absolute numbers.

[b]The number of enrolled students contains duplicate enrollments (i.e., students may be counted 2 or more times if enrolled in 2 or more Vo-Ag Classes). Sources: (1) Coordinating Council for Occupational Education Directory of Teachers and (2) Print-out #1083.

The data displayed in Tables 2 and 3 prompted the researchers to investigate how the Vo-Ag teachers were coping with the increased student enrollment. Table 4 shows the response rate obtained from the high school survey item which asked general statements about teacher load and preparation time. It can be observed that preparation time allowed for Vo-Ag teachers as perceived by them is probably not much different from that of most teachers in the high school. However, there appears to be some perceived differences in teaching load.

Table 4

Number of Responses to High School Survey Questionnaire Items 7 and 8: "Please indicate how you perceive the teaching load of Vocational Agriculture teachers in relation to all other teachers for each of the following scales."

| | Category | Number of Responses | Percent |
|---|---|---|---|
| 7. | The teaching load in Vo-Ag is heavier than for most teachers in the high school. | 56 | 38 |
| | The teaching load in Vo-Ag is about equal to that of most teachers in the high school. | 81 | 55 |
| | The teaching load in Vo-Ag is lighter than for most teachers in the high school. | 11 | 7 |
| | Totals | 148 | 100 |
| 8. | The "conference or preparation" periods for Vo-Ag teachers are greater than for most teachers in the high school. | 13 | 9 |
| | The "conference or preparation" periods for Vo-Ag teachers are about equal to that of most teachers in the high school. | 118 | 82 |
| | The "conference or preparation" periods for Vo-Ag teachers are fewer than those for most teachers in the high school. | 13 | 9 |
| | Totals | 144 | 100 |

Note: The totals will not equal 302, the number of respondents who participated in the survey, since only 153 high schools offered a Vo-Ag program.

Of the responding Vo-Ag teachers, 38 percent felt that their teaching load was heavier than that of other teachers in the high school, 55 percent stated that the loads were equal to other teachers and 7 percent stated that their teaching loads were lighter.

Comments written on the questionnaire by some respondents indicated that some of the Vo-Ag teachers were dissatisfied with their heavy teaching loads. For example, after indicating that a Vo-Ag program expansion was planned, the respondent indicated that the "Load now is a bit busy for one guy with 176 students." Others wrote that "More certified Vo-Ag teachers will be needed, but not hired;" and "Locked-in--cattle price too low."

It would appear that these are specific cases where additional Vo-Ag teachers are needed due to heavy class loads. However, we were not able to quantify the exact number of teachers needed from the data collected. It would appear that some Vo-Ag teachers are currently needed to reduce class size and/or loads. If a teacher has a one-class overload it would be difficult to justify two full-time Vo-Ag teachers. Thus, the problem of part-time Vo-Ag teachers will remain unresolved.

## The Need for Vo-Ag Teachers

The question "Will there be a greater or lesser Vo-Ag teacher demand in the near future?" was by far the most difficult one for the investigators to determine. What is the demand for and what is the supply of Vo-Ag teachers? It has already been indicated that the current number of fully trained and certified Vo-Ag teachers can be improved. However, the present number of teachers will be used as a baseline for this study.

Teacher Demand

Reasons for schools to hire Vo-Ag teachers as indicated by the survey data were: (1) replacement of retiring Vo-Ag teachers; (2) replacement of Vo-Ag teachers leaving teaching; (3) addition of Vo-Ag teachers to alleviate overcrowded Vo-Ag classes; and (4) expansion of Vo-Ag programs resulting from schools implementing a new Vo-Ag program, adding more class periods to accommodate increased student enrollment, or increasing the variety of Vo-Ag courses offered.

Data from the survey indicated three main reasons why schools may reduce the current number of Vo-Ag teachers: (1) levy failures, (2) school consolidations, and (3) Vo-Ag program reductions resulting from decreased student enrollment in Vo-Ag classes or fewer types of Vo-Ag courses being offered.

Vo-Ag Program Plans

The demand for Vo-Ag teachers is illustrated by tables which follow. Table 5 shows that between the years 1970 and 1975, there has been a continued increase in the number of schools offering Vo-Ag courses in Washington State.

Table 5

Number of High Schools Offering
Vocational Agriculture Courses in Washington
1970-1975

| Academic Years | Number of High Schools |
|---|---|
| 1974-1975 | 153 |
| 1973-1974 | 144 |
| 1972-1973 | 140 |
| 1971-1972 | 136 |
| 1970-1971 | 136 |

Source: Coordinating Council for Occupational Education Directory of Teachers. (Note: There were 311 high schools in the state during 1974-75.)

Table 6 shows that of the 152 responding high schools in Washington currently without a Vo-Ag program, 18 have plans to add a Vo-Ag program, 122 do not have plans to add a Vo-Ag program, and 12 do not know if there are plans for a Vo-Ag program. Table 7 shows that of the 152 schools currently without a Vo-Ag program, 8 schools will implement a Vo-Ag program in 1975-76, 4 schools will implement a Vo-Ag program in 1976-77, 3 schools have plans to start a Vo-Ag program after 1977, and 37 schools did not know when a Vo-Ag program might be implemented.

Table 6

Number of Responses tc High School Survey Item 3: "If there are no Vo-Ag courses or programs in your high school, are there plans for your high school to offer a Vo-Ag course or program?"

| Response | Number | Percent of Total |
|---|---|---|
| Yes | 18 | 12 |
| No | 122 | 80 |
| Do not know | 12 | 8 |
| Totals | 152 | 100 |

Table 7

Number of Responses to High School Survey Item 4:
"If a Vo-Ag course or program is planned for your high school, in which year will it start?"

| Category | Number Responding |
|---|---|
| 1975-76 school year | 8 |
| 1976-77 school year | 4 |
| After 1977 school year | 3 |
| Do not know | 37 |
| Total | 52 |

Table 8 shows the reasons why schools are not planning to add a Vo-Ag program. "Not enough student interest" was the reason most frequently specified and "no need for agriculture training" was the second response most frequently identified by the respondents. (Note: Some respondents used check marks for two or three categories and some respondents wrote on the questionnaire that the multiple identified categories were of equal importance. All such noted responses were recorded as first rankings.)

Respondents in schools currently having Vo-Ag programs were asked to compare the 1974-75 program to their planned program for 1975-76. The results are shown in Table 9. Ninety-four schools will offer the same program, while 56 schools plan a change. Forty-five schools will expand their programs, while 11 schools plan to reduce their programs.

Table 10 shows the number of teachers who will be involved in the expansions and reductions. Eighteen teachers are needed for expansion,

but 10 teachers will be involved in program reductions. Although our computations from the reported data show a total of 8 Vo-Ag teachers needed for 1975-76, the number may not be absolute. Comments written on the questionnaires by respondents explain some of the problems in determining an exact teacher need. The confusion appears in the "Other" categories. Table 10 shows that two teachers will be needed for expansion, but one school will use a teacher already on the staff while another school will use two half-time teachers full-time. The two schools that marked the "Other" category will drop their Vo-Ag program because of a levy failure, and one school indicated their Vo-Ag teacher would switch to a non-agriculture business.

From these explanations, it appears that the eight Vo-Ag teachers calculated from the data in Table 10 might in actuality be six since two full-time equivalent teachers will be utilized from present staffs. One other school indicated that one Vo-Ag teacher "may possibly" be needed for next year, but that figure is not shown in the table.

Tables 11, 12, and 13 indicate reasons why schools may adopt their planned Vo-Ag program for 1975-76 school year. Table 11 is self-explanatory except for the "Other" category. Following are a few such response examples: "Need to add one teacher, but no facilities.", "More teachers needed, but won't be hired.", "Will teach from 3 to 6 p.m. on separate contract.", and "Levy failure, expansion was anticipated" [sic].

Table 8

Number of Responses to High School Survey Items 5 and 6: "If no Vo-Ag course or program is planned for the immediate future, please rank in order the first and second reason which best describe why a course or program will not be added."

| Category | Number of Respondents Who Ranked Item in First Place | Number of Respondents Who Ranked Item in Second Place |
|---|---|---|
| Not enough student interest | 53 | 22 |
| No need for agriculture training in our school | 30 | 14 |
| Lack of facilities | 19 | 22 |
| No certified Vo-Ag teachers | 17 | 8 |
| Lack of money | 7 | 19 |
| Levy failures | 4 | 9 |
| Other subjects considered more important | 8 | 12 |
| Other | 10 | 3 |

Table 9

Number of Responses to High School Survey Items 9 and 10: "Which of the following best compares this year's (1974-75) Vocational Agriculture classes/courses to next year's (1975-76) planned Vo-Ag classes/courses?"

| | Category | Number of Responses | Percent of Total |
|---|---|---|---|
| 9. | Fewer classes will be offered in 1975-76 | 11 | 7 |
| | Same for both years | 94 | 63 |
| | More classes will be offered in 1975-76 | 45 | 30 |
| | Totals | 150 | 100% |
| 10. | Fewer courses will be offered in 1975-76 | 10 | 7 |
| | Same for both years | 94 | 63 |
| | More courses will be offered in 1975-76 | 46 | 30 |
| | Totals | 150 | 100% |

Table 10

Number of Responses to High School Survey Items 11 and 12: "Next year's (1975-76) curriculum will cause which of the following to happen to your staffing pattern?"

| Category | Number Responding | Number of Teachers Involved |
|---|---|---|
| No changes in staffing are anticipated | 117 | 0 |
| More certified Vo-Ag teacher(s) will be needed (expansion assumed) | 16 | 16 |
| Certified Vo-Ag teacher(s) will teach other subjects (reduction assumed) | 3 | 3 |
| Certified Vo-Ag teacher(s) will be transferred to another school (reduction assumed) | 4 | 5 |
| Other (expansion) | 2 | 2 |
| Other (reduction) | 2 | 2 |

Totals

| | |
|---|---|
| Number of Vo-Ag teachers needed for expansion | 18 |
| Number of Vo-Ag teachers available from reduction | 10 |
| Total number of Vo-Ag teachers needed | 8 |

Table 11

Number of Responses to High School Survey Item 13: "If no change in the number of Vo-Ag classes, check only one statement that best describes your reason for the Vo-Ag curriculum plans for next year."

| Category | Number Responding |
|---|---|
| We have the proper balance of classes offered at our school | 46 |
| There is not enough student interest to warrant more classes | 6 |
| Not enough certified Vo-Ag teachers to enable a class increase | 17 |
| Vo-Ag Advisory Committee decision | 1 |
| Other | 15 |
| Total | 85 |

Table 12 shows reasons why schools plan to increase their number of Vo-Ag classes. This item is one of the two survey items where responses varied in relation to larger schools (500 or more student enrollment). Respondents from smaller schools who planned to increase the number of Vo-Ag classes identified the primary reason for expansion as "curriculum officials felt that it was advisable." (Small schools: 7 of 21 responses; Large schools: 4 of 27 responses.)

Respondents from larger schools who planned to increase the number of Vo-Ag classes reported that expansion was due mainly because, "Student interest was high." (Large schools: 16 of 27 responses; Small schools: 6 of 21 responses.)

Table 12

Number of Responses to High School Survey Item 14:
"If increasing the number of Vo-Ag classes, check only one statement that best describes your situation."

| Category | Number Responding |
|---|---|
| Student interest was high | 26 |
| Curriculum officials felt it advisable | 11 |
| Vo-Ag Advisory Committee decision | 8 |
| School patrons felt it advisable | 2 |
| Other | 5 |
| Total | 52 |

The reasons for schools decreasing their Vo-Ag programs are shown in Table 13. The "Other" category contained explanations such as levy failure or one class was dropped because it was being taught during the teacher's preparation period.

Table 13

Number of Responses to High School Survey Item 15: "If decreasing the number of Vo-Ag classes, check only one statement that best describes your situation."

| Category | Number Responding |
|---|---|
| Curriculum officials felt it advisable | 3 |
| Student interest was low | 1 |
| School patrons felt it advisable | 0 |
| Vo-Ag teacher leaving school | 0 |
| Vo-Ag Advisory Committee decision | 0 |
| Other | 4 |
| Total | 8 |

Vo-Ag Teacher Attrition

Age and number of years of teaching experience are two key variables when investigating one type of teacher attrition--retirement. A teacher may retire at the age of 65 or after 30 years of teaching experience. Table 14 shows the age distribution of Washington's Vo-Ag teachers. The data indicate that the majority of Vo-Ag teachers are relatively young, hence not approaching retirement. Four teachers will

reach the mandatory retirement age in the next five years. Figure 1 depicts those data graphically.

Figure 1 also shows the comparative ages for the entire public school teaching corps for the state of Washington. These data are the most recent obtainable from the SPI. Although they represent the 1972-73 school year we are using them to indicate the fact that the Vo-Ag teachers are a somewhat younger group than the entire group of all teachers in the state.

Observable on both graph lines is that after age 39 there is a sharp decline in the percent in each category. As one Vo-Ag teacher commented, "After 39 you're too burned out from the job to continue!"

Table 14

Age Distribution of Vocational Agriculture Teachers in Washington State in 1974

| Age[a] | Number | Percent of Total | Percent of All Washington Teachers |
|---|---|---|---|
| 29 and under | 69 | 33 | 27 |
| 30-34 | 38 | 18 | 15 |
| 35-39 | 32 | 15 | 12 |
| 40-44 | 20 | 9 | 12 |
| 45-49 | 18 | 8 | 11 |
| 50-54 | 21 | 10 | 9 |
| 55-59 | 10 | 5 | 7.5 |
| 60-64 | 4 | 2 | 6.5 |
| 65 and over | 0 | 0 | 1 |
| Totals | 212[b] | 100% | 100%[c] |

[a]Age as of September 1, 1974

[b]Ages of 8 of the total 220 Vo-Ag teachers were not reported.

Source: Coordinating Council for Occupational Education, Vo-Ag Teachers Directory Agriculture Education, 1974-75.

[c]Source: Supply and Demand Study 1972-73, SPI for all public school teachers based on ages for 1972-73 school year--the latest available data which means that these data are indicative.

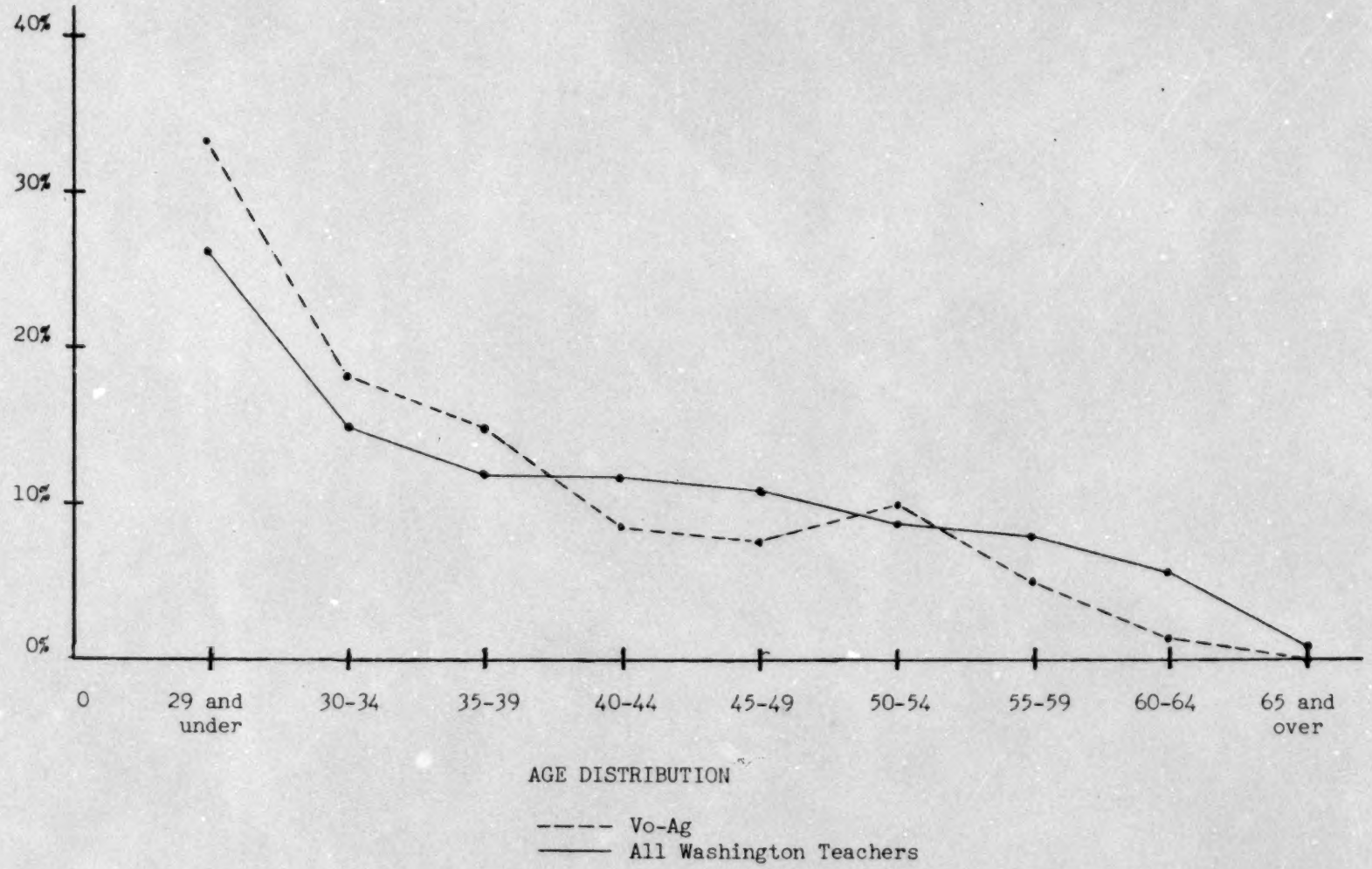


Figure 1. Age Distribution of Vocational Agriculture Teachers in Washington State in 1974 and all Washington Teachers.

Sources: Table 4 for Vo-Ag. Supply and Demand Study, 1972-73, SPI for all public school teachers.

The number of Vo-Ag teachers who could opt for retirement after 30 years teaching experience is shown in Table 15. The vast majority of Vo-Ag teachers are not nearing retirement with 30 years experience. Vo-Ag teachers having 25 or more years experience numbered 16. The scope of this study did not warrant personally contacting the 16 teachers to see if they were contemplating retirement after 30 years of teaching. Curriculum planners must, however, be aware of such possibilities.

Table 15

Years of Teaching Experience of Selected Vocational Agriculture Teachers in Washington State in 1974[a]

| Number of Years Teaching Experience | Number of Teachers | Percent of Total | Percent for All Washington Teachers[c] |
|---|---|---|---|
| 0-4 | 74 | 39 | 32 |
| 5-9 | 40 | 21 | 21 |
| 10-14 | 25 | 13 | 17 |
| 15-19 | 21 | 11 | 12 |
| 20-24 | 12 | 7 | 9 |
| 25 and over | 16 | 9 | 9 |
| Totals | 188[b] | 100% | 100% |

[a]Experience in Vo-Ag teaching only. Some Vo-Ag teachers also have experience in other areas.

[b]Years experience for 32 of 220 Vo-Ag teachers were not obtained.

Source: Coordinating Council for Occupational Education, "Years of Experience Vo-Ag Teaching 1974-1975".

[c]Source: Unpublished reports, Office of State Superintendent of Public Instruction. Data are for 1972-73 school year, the latest available, but adequate for an indicative comparison. The investigators derived data since original report used different five-year intervals.

Table 15 also shows that 39 percent of the state's Vo-Ag teachers have 0-4 years teaching experience. Previous research by W. W. Charters, Jr. has shown that the first five years of teaching is a most critical period for teacher retention*. During this period of time attrition is high among the group, as is mobility.

Since we had no comparative data we could not determine the mobility or turnover of the first five-year Vo-Ag teacher group. For the state of Washington in 1972-73 the turnover rate was about 11.7 percent. Thus, we could expect some attrition for the largest group of Vo-Ag teachers by age classification.

Vo-Ag teachers leave teaching for reasons other than retirement. Table 16 shows why some teachers apparently plan to leave their present schools. A difference in reasons for leaving present positions was found when comparing larger school responses to smaller school responses. Smaller schools were more likely to lose their Vo-Ag teachers to non-agriculture business (3 of 9 teachers leaving). Larger schools tended not to lose any Vo-Ag teachers to non-agriculture business (0 of 9 teachers leaving).

As the note at the bottom of Table 16 explains, 8 teachers will probably move to other schools in Washington, not causing any teacher demand. Therefore, of the 18 Vo-Ag teachers leaving schools, 8 will probably move to other schools resulting in a teacher demand of 10. In addition to the computed quantity of 10 teachers, 4 additional teachers indicated there was a possibility they would leave their schools. Such indecisive

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* W. W. Charters, Jr., "Some Factors Affecting Teacher Survival in School Districts," American Educational Research Journal, Vol. 7, pp. 1-27, January 1970.

responses are not included in the data shown in Table 16, but are simply reported as possible sources for variance in absolute numbers.

Table 16

Number of Responses to High School Survey Items 16 through 28: "If Vocational Agriculture teachers are leaving your school during 1975 for any of the following reasons, please place the number of those leaving on the appropriate line(s)."

| Category | Number Responding | Number of Teachers Leaving |
|---|---|---|
| Do not know | 2 | 2 |
| Retiring | 2 | 2 |
| Moving to administration | 0 | 0 |
| Moving to Community College | 0 | 0 |
| Teaching in another state | 0 | 0 |
| Switching to farming | 1 | 1 |
| Switching to agri-business | 0 | 0 |
| Switching to non-agriculture business | 3 | 3 |
| Switching to non-agriculture teaching | 0 | 0 |
| Serving in military | 0 | 0 |
| Deceased | 0 | 0 |
| Attending graduate studies | 2 | 2 |
| Moving to another school | 6 | 7 |
| Other | 1 | 1 |
| Totals | 17 | 18 |

Total replacements needed in Washington for 1975-76 ------ 10

Note: The seven teachers moving to other schools in the state will not cause a teacher demand. The one "Other" teacher will more than likely also teach in Washington.

Table 17 shows the reported reasons for teachers leaving Vo-Ag teaching for the years 1972 through 1975. The four main reasons are: retirement and moves to farming, agri-business, and non-agriculture business, respectively.

The percent of Vo-Ag teachers who leave teaching in Washington each year is shown in Table 18. The data indicate that 1975 had fewer teachers leaving Vo-Ag than any other year since 1972.

Table 17

Reasons for Vocational Agriculture Teachers Leaving Teaching of Vocational Agriculture in Washington Secondary Schools 1972-1975

| Reasons | Years | | | | | |
|---|---|---|---|---|---|---|
| | 1972 | 1973 | 1974 | 1975 | Totals | % of Total |
| Retired | 1 | 6 | 5 | 2 | 14 | 22 |
| Moved to administration | 2 | 2 | 1 | | 5 | 7 |
| Moved to Community College | | 1 | | | 1 | 1 |
| Teaching in another state | 3 | 1 | 3 | | 7 | 10 |
| Farming | | 5 | 4 | 1 | 10 | 15 |
| Agri-business | 2 | 3 | 6 | | 11 | 16 |
| Non-Agriculture business | | 2 | 3 | 3 | 8 | 12 |
| Teaching Non-Agriculture | 1 | | | | 1 | 1 |
| Military | 1 | | 1 | | 2 | 3 |
| Deceased | 1 | | | | 1 | 1 |
| Graduate Study | | 2 | | 2 | 4 | 6 |
| Don't know | 1 | 1 | | 2 | 4 | 6 |
| Totals | 12 | 23 | 23 | 10 | 68 | 100% |

Sources: (1) Coordinating Council for Occupational Education Summary of Agriculture Teachers Who Have Left High School Teaching Since 1968 and (2) Washington State University 1975 Vocational Agriculture Survey.

Table 18

Percent of Vocational Agriculture Teachers Leaving Teaching of Vocational Agriculture in Washington Secondary Schools 1972-1975

| Last Year of Teaching | Number Leaving Teaching | Total Vo-Ag Teachers Teaching | Percent of Total Who Left |
|---|---|---|---|
| 1975 | 10 | 220 | 4.6 |
| 1974 | 23 | 203 | 11.3 |
| 1973 | 23 | 184 | 12.5 |
| 1972 | 12 | 177 | 6.8 |

Sources: (1) Coordinating Council for Occupational Education Directory of Teachers, (2) Coordinating Council for Occupational Education Summary of Agriculture Teachers Who Have Left High School Teaching Since 1968, and (3) Washington State University 1975 Vocational Agriculture Survey.

Supply

There are two main supply sources for Vo-Ag teachers for Washington: (1) New graduates in Vo-Ag and (2) Experienced Vo-Ag teachers returning to the profession. The task of estimating the number of experienced Vo-Ag teachers who return to the profession for any given year is difficult to compute and was beyond the scope of this study. The number is estimated to be very small, hence should not seriously affect the supply data. Accurate data are, however, available for new graduates in Vo-Ag. Table 19 shows the major higher education sources for Washington Vo-Ag teachers in 1973. The data indicate that Washington State University has supplied about 60 percent of the total Vo-Ag teachers. There may also be some Washington State University graduates in the unknown category which our data did not reveal.

The following data indicate that in recent years comparatively few new graduates came from out-of-state schools. Also, of the 29 Vo-Ag teachers recorded in the "Other" category, 9 were graduates of Washington schools other than Washington State University. (None of the other Washington institutions has a Vo-Ag teacher preparatory program.)

Table 19

Major Higher Education Sources for All Washington Vocational Agriculture Teachers Who Were Teaching in 1972-1973

| University | Number | Percent of Total |
|---|---|---|
| Washington State University | 120 | 60 |
| University of Idaho | 14 | 7 |
| Oregon State University | 6 | 3 |
| Other (18 different institutions) | 29 | 15 |
| Unknown | 31 | 15 |
| Totals | 200 | 100% |

Source: Teacher Conference Report Vocational Agriculture and Renewable Natural Resources Education July 23-27, 1973.

Table 20 shows the northwest region universities having Vo-Ag programs. These are Washington State University, Montana State University, University of Idaho, Utah State University, and Oregon State University. The data indicate that at these schools nearly all of the students who receive a Bachelor's degree also receive a teaching certificate and vice versa.

Table 20

Responses to University Survey Items 1 and 2: "How many Vo-Ag teachers graduated from your institution with a Bachelor's degree and received a valid teaching certificate for each of the following years?"

| Year | Preparation | Washington State University | University of Idaho | Oregon State University | Utah State University | Montana State University |
|---|---|---|---|---|---|---|
| 1974 | Bachelor's Degree | 25 | 7 | 8 | 8 | 17 |
| | Teaching Certificate | 24 | 7 | 8 | 8 | NR |
| 1973 | Bachelor's Degree | 23 | 11 | 17 | 11 | 19 |
| | Teaching Certificate | 24 | 11 | 17 | 12 | NR |
| 1972 | Bachelor's Degree | 17 | 9 | 13 | 13 | 22 |
| | Teaching Certificate | 17 | 9 | 13 | 13 | NR |
| 1971 | Bachelor's Degree | 16 | 15 | 17 | 11 | 14 |
| | Teaching Certificate | 16 | 15 | 13 | 11 | NR |

NR -- Not Reported

The types of positions entered by Vo-Ag teacher graduates of the class of 1974 are shown in Table 21. The data indicate that the vast majority of students do not leave their home states. Also, the great majority (92%) of Washington State University Vo-Ag graduates entered a Vo-Ag teaching position in the state.

Table 21

Responses to University Survey Item 4: "What percent of the Vo-Ag teacher graduates, class of 1974, entered the following type of position?"

| Position | Washington State University | University of Idaho | Oregon State University | Utah State University |
|---|---|---|---|---|
| Teaching Vo-Ag in your state | 92 | 86 | 75 | 62.5 |
| Teaching Vo-Ag out-of-state | 0 | 0 | 0 | 25.0 |
| Not teaching Vo-Ag | 8 | 14 | 25 | 12.5 |
| Totals | 100 | 100 | 100 | 100 |

Table 22 indicates the number of Vo-Ag teacher graduates expected from the region's universities in 1975 and 1976. Since Washington cannot expect a significant number of graduates from out-of-state schools, only the graduates from Washington State University are important to the study. (Note: The data supplied by Montana State University could not be compared to the other schools.)

The responses from four of the institutions which provide Vo-Ag teachers indicate that the number of juniors enrolled in Vo-Ag during 1974-75 approximates the number of 1975 Vo-Ag graduates from the schools; except for Utah State University which reported over a 100 percent increase of juniors majoring in Vo-Ag.

Table 22

Responses to University Survey Items 5 and 6:
"How many Vo-Ag teacher graduates do you anticipate for 1975?"
and "How many juniors are currently enrolled as Vo-Ag
teaching majors?"

| Item | Washington State University | University of Idaho | Oregon State University | Utah State University |
|---|---|---|---|---|
| Vo-Ag teacher graduates for 1975 | 26 | 11 | 18 | 8 |
| Juniors enrolled as Vo-Ag teaching majors during 1974-75 | 24 | 12 | 19 | 17 |

Table 23 shows that the identified regional states all had unfilled Vo-Ag teaching positions for the 1974-75 school year. But, in all cases the number was four or fewer.

Table 23

Responses to University Survey Item 8: "How many unfilled Vo-Ag teaching positions were there (to your knowledge) in your state's secondary schools in 1974-75?"

| | Washington State University | University of Idaho | Oregon State University | Utah State University |
|---|---|---|---|---|
| Number | 3 | 1 | 3 | 4 |

Table 24 shows the number of Vo-Ag graduates who found teaching positions in Washington. Only the University of Idaho reported supplying Washington with Vo-Ag teachers and the data indicate that such practice may be declining or at least it is not extensive.

Table 24

Responses to University Survey Item 3: "How many of your Vo-Ag graduates found teaching positions in Washington for each of the following years?"

| Year | Washington State University | University of Idaho | Oregon State University | Utah State University |
|---|---|---|---|---|
| 1974 | 23 | 3 | 0 | 0 |
| 1973 | 21 | 1 | 0 | 0 |
| 1972 | 15 | 0 | 0 | 0 |
| 1971 | 15 | 3 | 0 | 0 |

## Summary

As was discussed in the section on teacher demand, the investigators used the 1974-75 Vo-Ag teacher count as a baseline for computing future supply and demand forecasts. The following formula may be used to compute future supply and demand:

$$N = \underbrace{(A + E_1 + E_2 + U)}_{\text{demand}} - \underbrace{(G + V)}_{\text{supply}}$$

where:

N = 1975-76 Vo-Ag teacher need

A = Attrition of Vo-Ag teachers (Table 16)

$E_1$ = Expansions of Vo-Ag programs which will cause a demand for Vo-Ag teachers (Table 10)

$E_2$ = Expansions in Vo-Ag programs caused from schools implementing new programs (Table 7)

U = Unfilled Vo-Ag positions from previous years (Table 23)

G = Number of Washington State University Vo-Ag teaching graduates (Table 22)

V = Vo-Ag teachers available from Vo-Ag program reductions in the high schools or those returning to teaching (Table 10)

therefore:

$N = (10 + 18 + 8 + 3) - (26 + 10)$

$N = 3$

The data taken from the identified tables indicate that Washington will be three Vo-Ag teachers short of supplying the demand for 1975-76. However, as indicated throughout this report, the numbers are not absolute and are subject to variance. An explanation of how the numbers in the formula may change will follow, then forecasts for the 1976-77 school year will be presented using the same formula and logic. A detailed explanation of the 1976-77 school year will not be provided.

Note: Not considered in the formula is a reduction in class size factor. Table 2 shows that the average class size has increased by three students between 1970 and 1973. A more sophisticated formula might incorporate that variable. We did not since there were too many unknowns in the variable to make it meaningful.

Supply

The first consideration for the 1975-76 Vo-Ag teacher supply and demand figures is that 34 of the state's 220 Vo-Ag teachers in 1974-75 held specially issued teaching certificates. Such "special" certificates are not permanent types. Teachers holding temporary certificates may have them renewed on a yearly and individual needs basis. The researchers had no way of predicting the number of renewals that would be granted; therefore, a greater shortage than three Vo-Ag teachers could occur in 1975 if some of the special certificates are not renewed. The extent of full-time teaching by these 34 persons was not determined. But, it may be assumed that if 34 completely trained and certified teachers were available, the number of such special certificates might decline.

The numbers for the "G" variable (the number of 1975 Washington State University Vo-Ag teaching graduates) were taken from Table 22. The number (26) includes students who worked through their B.S. degree to a higher degree or fifth year. Only WSU graduates were considered because the data for institutions of higher education indicated that for recent years out-of-state Vo-Ag teachers migrating to Washington are not common.

The value for the "V" variable (the number of Vo-Ag teachers available from Vo-Ag program reductions in high schools) was taken from

Table 10. The value of "V" (10) is considered a supply of Vo-Ag teachers because those teachers will not be teaching Vo-Ag. However, there is the possibility that some of the Vo-Ag teachers involved might not be willing to move to other schools where Vo-Ag teacher shortages occur. Table 13 indicated why schools were reducing their Vo-Ag programs. If the reduction is a temporary one (e.g., levy failure), the value of "V" may not actually be a supply, but for the purpose of this study it was considered as such. It is possible that schools with a Vo-Ag teacher shortage could recruit a Vo-Ag teacher who will be teaching other subjects in the following year.

There is one other source of supply that was not computed in the formula. It is possible that experienced Vo-Ag teachers who left teaching in previous years or who were teaching in other states might return to teaching in Washington. There is no way of knowing if there will be any such Vo-Ag teachers, but it is considered a source of supply.

Demand

The value of "A" (the attrition of Vo-Ag teachers) is taken from Table 16. Besides the 10 Vo-Ag teachers who definitely need replacement, it was reported that 4 other Vo-Ag teachers were considering leaving. Such speculation could not be accounted for in the formula, but again the possibility exists. Also we could use the average turnover rate of the state to compute "A". There is some teacher loss during the first five critical years of teaching. In 1972 the overall average teacher turnover rate in Washington was 11.7 percent--the lowest rate in 10 years. (Turnover rate is not a loss rate.) But as is shown in Table 10, 4.6 percent of the Vo-Ag teachers in 1975 left their jobs. This

loss rate is probably much lower than the loss rate for the entire state teaching corps.

The value for "$E_1$" (the number of Vo-Ag teachers needed for Vo-Ag program expansions) was taken from Table 10. From the high school survey data it was observed that two schools planned to utilize Vo-Ag teachers already on staff for program expansions. Therefore, the 18 new Vo-Ag teachers needed probably ought to be 16. The latter figure was not used in the formula since the demand factor will be filled, in part, by presently employed staff. Again, we did not attempt to compute the numbers who might be needed to reduce class sizes.

The value for "$E_2$" (the number of Vo-Ag teachers needed for the implementation of new Vo-Ag programs) was taken from Table 7. The 8 schools that indicated they were planning to implement a Vo-Ag program in 1975-76 should be accurate. However, 37 other schools indicated they did not know if or when a Vo-Ag program would be implemented.

The "U" variable (unfilled Vo-Ag positions from the previous year) taken from Table 23 is not subject to change for computing the demand for 1975-76. It was reported that three positions were not filled during the 1974-75 school year.

The researchers have computed a shortage of three Vo-Ag teachers for the 1975-76 school year; however, the reader is invited to extrapolate with the other values provided in the formula explanation. Such values may range from an extreme shortage to no shortage at all. If there were a moderate teacher loss during the first five years of teaching, then the number could easily be ten Vo-Ag teachers. (This figure would assume a 12 percent loss per year for the 0-4 year teaching group, or eight teachers per year.) But one must be cautioned that teacher turnover is not equal

to teacher loss. Some mobile Vo-Ag teachers will teach in other districts and not be lost to Vo-Ag.

A demographic consideration. There is one additional element which seems to indicate that the demand factors of our study and formula are conservative and perhaps somewhat low. Observe Table 14 which presents the age distribution for Vo-Ag teachers in 1974 showing that 66 percent are 39 years or younger. The state of Washington's entire teacher corps exhibits a slightly different age profile with 53 percent being 39 years or younger (see Fig. 1). These data may be interpreted to show that Vo-Ag teachers are a somewhat younger group and that they appear to have a rather high attrition rate over age 40. If the latter conclusion is valid, then it would appear that four or five additional Vo-Ag teachers might be needed each year to compensate for this factor alone. Since we did not establish a longitudinal examination of the age data, no conclusive statement may be made. Yet, age 40 seems critical to this particular segment of Washington's teacher corps. When the age factor is added to those previously discussed the demand for Vo-Ag teachers might approach 52 to 54 Vo-Ag teachers per year, but with a supply of about 36. Thus, there is a range of from 3 to 18 teachers who might be needed beyond the supply.

## Conclusions

From the totality of data collected in this study we conclude that:

1. There is a modest demand for Vo-Ag teachers in the state.
2. The level of demand may exceed supply by a low 3 to an optimum of 10 to a maximum of about 20 Vo-Ag teachers in 1975-76.

3. The supply of Vo-Ag teachers in Washington seems to be established at about 25 per year from Washington State University which is almost equal to demand and might be adequate under current circumstances.

## 1976-77 Supply and Demand Forecast

Following are the values for the formula to predict the 1976-77 Vo-Ag teacher supply and demand. The values were derived from the same data and logic as was used for the 1975-76 forecast. Attrition rates and levy failures were considered. Vo-Ag program expansion must be carefully considered because with declining high school student enrollments there could also be a saturation limit to Vo-Ag program growth.

$$N = (A + E_1 + E_2 + U) - (G + V)$$
$$N = (14 + 10 + 4 + 3) - (24 + 5)$$
$$N = 3$$

The data above indicate that three Vo-Ag teachers will be needed in 1976-77. That number would be very conservative, being a minimal base. A demand in excess of supply of 12-15 Vo-Ag teachers could be possible.

## Closing Statement

We have not discussed any issues related to Vo-Ag program expansion to other institutions in the state. If our predictions are valid, then expansion of Vo-Ag curricula to other institutions might not be cost-effective, i.e., the predicted small numbers could not justify program expansion on the full-time equivalent (FTE) allocation formula used to fund institutional programs. Yet, if Washington State University were to expand the Vo-Ag program only slightly and recruit a few more students, that institution could probably fulfill the state's total Vo-Ag teacher demand.

As with all surveys and reports of current circumstances, the data are simply tentative. We offer this report and our conclusions for further replication so that the validity and stability of the data may be tested.

Need for additional study. We would suggest that a follow-up be conducted to study five factors or variables which we did not examine. These are:

1. The precise status of Vo-Ag teachers holding special certificates: including age, teaching load, academic qualifications, size of school, and percent of time teaching Vo-Ag.
2. The turnover rate of Vo-Ag teachers with emphasis on determining "loss".
3. The impact of course expansion on teacher demand at the full-time basis including the effect of reducing class size where there are apparent overloads.
4. The impact of part-time Vo-Ag teachers on hiring patterns.
5. The institutional capability of Washington State University to expand its current Vo-Ag program so that a minor excess in supply of Vo-Ag teachers could be matriculated.

These factors emerged after our study had been nearly completed or as we analyzed the data. That is the reason the factors were omitted. Such a study should be supported by a state research grant.

By focusing on the above five unanswered factors a rather precise determination of Vo-Ag teacher supply and demand could be calculated for 1976-77 and possibly through 1979.

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*Final note: As of August 1, there were seven fully certified Vo-Ag majors who had graduated from Washington State University in June 1975 who were still seeking a teaching position. Perhaps our more conservative estimate is the most realistic.

APPENDIX A

CHECK LIST FOR AGRICULTURAL EDUCATION

NAME _____ DATE _____

YEARS OF VO-AG IN HIGH SCHOOL _____ HIGH SCHOOL _____

The course of study leads to the degree of Bachelor of Science in Agricultural Education. Minimum requirements for the Provisional Certificate and for the Vocational Certificate in Agriculture are met through the schedule of studies given below.

NOTE: Courses which are underlined or appropriate substitutes are required for B.S. in Agricultural Education.

Written or Oral English (6 Hrs.) Engl 101-3; 201-3; or Com - 3; or Ag 205-3.

Social Science (7 Hrs.) Psych 101-3; Econ 201-4.

Arts & Humanities (6 Hrs.) Speech 112-3; Humanities elective - 3.

Mathematics - Math 101 Competence

Biological Science (8 Hrs.) Bio S 103-4; 104-4.

Physical Science (8 Hrs.) Chem 101-4; 102-4.

Education (29 Hrs.) Educ 200-2; 300-4; 402-2; 403-3; VTE 340-2; 341-2; 407-12; 440-2. September Experience

Health Education (2 Hrs.) Health Ed 263-264; 480 or 481-2.

The Bachelor of Science Degree in Agricultural Education under any of the following options requires a minimum of 120 semester hours.

*Agricultural Science - A minimum of 45 hours to be selected from one of the following options are required for Vocational Certification:

| Production Agriculture - Mechanics | | | Production Agriculture - Business | | |
|---|---|---|---|---|---|
| Ag Econ | (3 Hrs.) | 340-3 | Ag Mech | (6 Hrs.) | 201-3, 402-3 |
| Agron | (5 Hrs.) | 101-3, 201-2 | Agron | (5 Hrs.) | 101-3, 201-3 |
| AS | (5 Hrs.) | 101-3, 301-2 | AS | (5 Hrs.) | 101-3, 301-2 |
| Ent | (3 Hrs.) | 340-3 | Ent | (3 Hrs.) | 340-3 |
| Hort | (3 Hrs.) | 101-3 | Hort | (3 Hrs.) | 101-3 |
| Soils | (5 Hrs.) | 201-3, 301-2 | Soils | (3 Hrs.) | 201-3 |
| Ag Mech | (15 Hrs.) | 201-3, 402-3 | Ag Econ | (3 Hrs.) | 201-3 |
| select a minimum of 9 credits from Ag M 203, 210, 211, 313, 321, 331,344 | | | Bus Ad | (3 Hrs.) | 210-3 |
| | | | select a minimum of 9 credits from Ag Econ 350, 351, 370, 490 and/or Bus Ad 201, 301, 310, 325, 350 | | |
| Horticulture | | | Agricultural Resources - Forestry | | |
| Ag Econ | (3 Hrs.) | select 3 | Ag Econ | (3 Hrs.) | elect 3 |
| Ag Mech | (6 Hrs.) | 201-3, 402-3 | Ag Mech | (6 Hrs.) | 201-3, 402-3 |
| Agron | (5 Hrs.) | 101-3, 201-2 | Agron | (5 Hrs.) | 101-3, 201-3 |
| AS | (3 Hrs.) | 101-3 | AS | (3 Hrs.) | 101-3 |
| Ent | (3 Hrs.) | 340-3 | Ent | (3 Hrs.) | 340-3 |
| Soils | (5 Hrs.) | 201-3, 301-2 | Hort | (3 Hrs.) | 101-3 |
| Plant P | (3 Hrs.) | 329-3 | Plant P | (3 Hrs.) | 329-3 |
| Hort | (15 Hrs.) | 101-3 or 201-3, 251-2 | Soils | (5 Hrs.) | 201-3, 301-2 |
| select a minimum of 9 credits from Hort 134, 231, 232, 235, 311, 313, 320, 334, 336, or 438 | | | For | (15 Hrs.) | 260-3, 303-3 |
| | | | select at least 9 credits from For 301, 304, 320, 351, 411, 412, or 415 | | |

*The specific course requirement may be substituted upon approval of advisor. NOTE: Agricultural courses with 101 designation may be substituted by courses within that department having higher prefixes.

APPENDIX B

SURVEY OF VOCATIONAL AGRICULTURE
TEACHER SUPPLY AND DEMAND

Sponsored by
The Office of Field Service and Research
College of Education
Washington State University
Pullman, WA 99163

DIRECTIONS

Most items can be answered by placing a check (✓ ) mark in the blank box ( ). Please respond appropriately where information is requested for other questions.

1. Please indicate your major responsibility by checking only one of the categories below.

( ) 1.1 Vocational Agriculture Teacher

( ) 1.2 High School Teacher

( ) 1.3 Administrator

( ) 1.4 Other (please specify) _____

2. How many secondary school students attend your high school (grades 9-12 or 10-12) for 1974-75?

( ) 2.1 1000 or more

( ) 2.2 750-999

( ) 2.3 500-749

( ) 2.4 250-499

( ) 2.5 249 or less

IF NO VOCATIONAL AGRICULTURE (Vo-Ag) COURSES ARE BEING TAUGHT IN YOUR HIGH SCHOOL, PLEASE CONTINUE BELOW WITH QUESTION 3.

IF THERE ARE VOCATIONAL AGRICULTURE (Vo-Ag) COURSES NOW BEING TAUGHT IN YOUR HIGH SCHOOL, PLEASE GO DIRECTLY TO QUESTION 7.

3. If there are no Vo-Ag courses or programs in your high school, are there plans for your high school to offer a Vo-Ag course or program?

( ) 3.1 Yes

( ) 3.2 No

( ) 3.3 Do not know

4. If a Vo-Ag course or program is planned for your high school, in which year will it start?

( ) 4.1 1975-76 school year

( ) 4.2 1976-77 school year

( ) 4.3 After 1977 school year

( ) 4.4 Do not know

5. & 6. If no Vo-Ag course or program is planned for the immediate future, please rank in order the first and second reasons which best describe why a course or program will not be added. Place a "1" in front of the primary reason. Place a "2" in front of the second most important reason. Please do not rank any other items. Just rank the first and second reasons, only.

_____ 1 Not enough student interest

_____ 2 No certified Vo-Ag teachers

_____ 3 No need for agriculture training in our school

_____ 4 Lack of facilities

(5)(6)
(1)(2) _____ 5 Lack of money

_____ 6 Levy failures

_____ 7 Other subjects considered more important

_____ 8 Other (please specify) _____

_____

If you are not offering any Vo-Ag courses, you have completed your portion of this questionnaire. Please return this questionnaire in the enclosed envelope. Thank you for your cooperation.

Please check only one response for each question, 7 & 8. Please indicate how you perceive the teaching load of Vo-Ag teachers in relation to all other teachers for each of the following scales.

7. ( ) 7.1 The teaching load in Vo-Ag is heavier than for most teachers in the high school.

( ) 7.2 The teaching load in Vo-Ag is about equal to that of most teachers in the high school.

( ) 7.3 The teaching load in Vo-Ag is lighter than for most teachers in the high school.

8. ( ) 8.1 The "conference or preparation" periods for Vo-Ag teachers are greater than for most teachers in the high school.

( ) 8.2 The "conference or preparation" periods for Vo-Ag teachers are about equal to that of most teachers in the high school.

( ) 8.3 The "conference or preparation" periods for Vo-Ag teachers are fewer than those for most teachers in the high school.

Questions 9 & 10 draw a distinction between classes and courses. Agriculture Science is an example of a course. The number of sections of Agriculture Science which are being taught equals the number of classes.

9. Which of the following best compares this year's (1974-75) Vo-Ag classes to next year's (1975-76) planned Vo-Ag classes?

( ) 9.1 Fewer classes will be offered in 1975-76.

( ) 9.2 Same for both years.

( ) 9.3 More classes will be offered in 1975-76.

10. Which of the following best compares this year's (1974-75) Vo-Ag courses to next year's (1975-76) planned Vo-Ag courses?

( ) 10.1 Fewer courses will be offered in 1975-76.

( ) 10.2 Same for both years.

( ) 10.3 More courses will be offered in 1975-76.

11. Next year's (1975-76) Vo-Ag curriculum will cause which of the following to happen to your staffing pattern?

( ) 11.1 No changes in staffing are anticipated.

( ) 11.2 More certified Vo-Ag teacher(s) will be needed (expansion assumed).

( ) 11.3 Certified Vo-Ag teacher(s) will teach other subjects (reduction assumed).

( ) 11.4 Certified Vo-Ag teacher(s) will be transferred to another school (reduction assumed).

( ) 11.5 Other (please specify)_____

_____

12. If you checked 11.2, 11.3, 11.4, or 11.5 in question 11, approximately how many teachers will be involved? Place the number on the appropriate line.

_____ 12.1 (11.2) More certified Vo-Ag teachers will be needed (expansion assumed).

_____ 12.2 (11.3) Certified Vo-Ag teacher(s) will teach other subjects (reduction assumed).

_____ 12.3 (11.4) Certified Vo-Ag teacher(s) will be transferred to another school (reduction assumed).

_____ 12.4 (11.5) Other (please specify) _____

_____

Questions 13, 14, and 15 concern some anticipated changes for 1975-76. You will only have to respond to one of the sets. Below is a quick summary.

13. Respond to number 13 if no change in Vo-Ag classes is anticipated.

14. Respond to number 14 if you anticipate increasing the number of Vo-Ag classes.

15. Respond to number 15 if you anticipate decreasing the number of Vo-Ag classes.

13. If no change in the number of Vo-Ag classes, check only one statement that best describes your reason for the Vo-Ag curriculum plans for next year.

( ) 13.1 We have the proper balance of classes offered at our school.

( ) 13.2 There is not enough student interest to warrant more classes.

( ) 13.3 Not enough certified Vo-Ag teachers to enable a class increase.

( ) 13.4 Vo-Ag Advisory Committee decision.

( ) 13.5 Other (please specify) _____

_____

14. If increasing the number of Vo-Ag classes, check only one statement that best describes your situation.

( ) 14.1 Curriculum officials felt it advisable.

( ) 14.2 Student interest was high.

( ) 14.3 School patrons felt it advisable.

( ) 14.4 Vo-Ag Advisory Committee decision.

( ) 14.5 Other (please specify) _____

_____

15. If decreasing the number of Vo-Ag classes, check only one statement that best describes your situation.

( ) 15.1 Curriculum officials felt it advisable.

( ) 15.2 Student interest was low.

( ) 15.3 School patrons felt it advisable.

( ) 15.4 Vo-Ag teacher leaving the school.

( ) 15.5 Vo-Ag Advisory Committee decision.

( ) 15.6 Other (please specify) _____

_____

16. If Vo-Ag teachers are leaving your school during 1975 for any of the following reasons, please place the number of those leaving on the appropriate line(s).

| Number Leaving | Reason for leaving |
|---|---|
| _____ | 16.1 Do not know |
| _____ | 17.1 Retiring |
| _____ | 18.1 Moving to administration |
| _____ | 19.1 Moving to Community College |
| _____ | 20.1 Teaching in another state |
| _____ | 21.1 Switching to farming |
| _____ | 22.1 Switching to agri-business |
| _____ | 23.1 Switching to non-agriculture business |
| _____ | 24.1 Switching to non-agriculture teaching |
| _____ | 25.1 Serving in military |
| _____ | 26.1 Deceased |
| _____ | 27.1 Attending graduate studies |
| _____ | 28.1 Other (please specify) _____ |

_____

Thank you for your cooperation. Please return this instrument in the stamped, self-addressed envelope which is enclosed. If you have any questions concerning this study, kindly contact:

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NOTE: A report of this survey is to be presented at the annual Washington Vocational Agriculture Teachers Association (WVATA) in Spokane, July 21-25, 1975.

For survey use only ID ___ ___ ___
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